



SEQUENCE LISTING

<110> LIN, EDWARD H.  
WU, XIFENG  
XIE, KEPING

<120> QUANTITATIVE RT-PCR TO AC133 TO DIAGNOSE CANCER AND  
MONITOR ANGIOGENIC ACTIVITY IN A CELL SAMPLE

<130> UTSC:755US

<140> 10/618,102

<141> 2003-07-11

<150> 60/406,535

<151> 2002-08-28

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<170> PatentIn Ver. 2.1

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Primer

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Ser Leu Leu Leu Leu Gly Leu Cys Gly Asn Ser Phe Ser Gly Gly Gln
      10           15           20

cct tca tcc aca gat gct cct aag gct tgg aat tat gaa ttg cct gca 151
Pro Ser Ser Thr Asp Ala Pro Lys Ala Trp Asn Tyr Glu Leu Pro Ala
      25           30           35

aca aat tat gag acc caa gac tcc cat aaa gct gga ccc att ggc att 199
Thr Asn Tyr Glu Thr Gln Asp Ser His Lys Ala Gly Pro Ile Gly Ile
      40           45           50

ctc ttt gaa cta gtg cat atc ttt ctc tat gtg gta cag ccg cgt gat 247
Leu Phe Glu Leu Val His Ile Phe Leu Tyr Val Val Gln Pro Arg Asp
      55           60           65           70

ttc cca gaa gat act ttg aga aaa ttc tta cag aag gca tat gaa tcc 295
Phe Pro Glu Asp Thr Leu Arg Lys Phe Leu Gln Lys Ala Tyr Glu Ser
      75           80           85

aaa att gat tat gac aag cca gaa act gta atc tta ggt cta aag att 343
Lys Ile Asp Tyr Asp Lys Pro Glu Thr Val Ile Leu Gly Leu Lys Ile
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gtc tac tat gaa gca ggg att att cta tgc tgt gtc ctg ggg ctg ctg 391
Val Tyr Tyr Glu Ala Gly Ile Ile Leu Cys Cys Val Leu Gly Leu Leu
      105           110           115

ttt att att ctg atg cct ctg gtg ggg tat ttc ttt tgt atg tgt cgt 439
Phe Ile Ile Leu Met Pro Leu Val Gly Tyr Phe Phe Cys Met Cys Arg
      120           125           130

tgc tgt aac aaa tgt ggt gga gaa atg cac cag cga cag aag gaa aat 487
Cys Cys Asn Lys Cys Gly Gly Glu Met His Gln Arg Gln Lys Glu Asn
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Ile Ile Ile Ser Ile Gly Ile Phe Tyr Gly Phe Val Ala Asn His Gln	
170 175 180	
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Val Arg Thr Arg Ile Lys Arg Ser Arg Lys Leu Ala Asp Ser Asn Phe	
185 190 195	
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Lys Asp Leu Arg Thr Leu Leu Asn Glu Thr Pro Glu Gln Ile Lys Tyr	
200 205 210	
ata ttg gcc cag tac aac act acc aag gac aag gcg ttc aca gat ctg	727
Ile Leu Ala Gln Tyr Asn Thr Thr Lys Asp Lys Ala Phe Thr Asp Leu	
215 220 225 230	
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Asn Ser Ile Asn Ser Val Leu Gly Gly Gly Ile Leu Asp Arg Leu Arg	
235 240 245	
ccc aac atc atc cct gtt ctt gat gag att aag tcc atg gca aca gcg	823
Pro Asn Ile Ile Pro Val Leu Asp Glu Ile Lys Ser Met Ala Thr Ala	
250 255 260	
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Ile Lys Glu Thr Lys Glu Ala Leu Glu Asn Met Asn Ser Thr Leu Lys	
265 270 275	
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Ser Leu His Gln Gln Ser Thr Gln Leu Ser Ser Ser Leu Thr Ser Val	
280 285 290	
aaa act agc ctg cgg tca tct ctc aat gac cct ctg tgc ttg gtg cat	967
Lys Thr Ser Leu Arg Ser Ser Leu Asn Asp Pro Leu Cys Leu Val His	
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315 320 325	
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cag ggc tat caa tcc ctt aat gat ata cct gac aga gta caa cgc caa	1159
Gln Gly Tyr Gln Ser Leu Asn Asp Ile Pro Asp Arg Val Gln Arg Gln	
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acc acg act gtc gta gca ggt atc aaa agg gtc ttg aat tcc att ggt	1207
Thr Thr Thr Val Val Ala Gly Ile Lys Arg Val Leu Asn Ser Ile Gly	
375 380 385 390	
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Ser Asp Ile Asp Asn Val Thr Gln Arg Leu Pro Ile Gln Asp Ile Leu	
395 400 405	
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Ser Ala Phe Ser Val Tyr Val Asn Asn Thr Glu Ser Tyr Ile His Arg	
410 415 420	
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Asn Leu Pro Thr Leu Glu Glu Tyr Asp Ser Tyr Trp Trp Leu Gly Gly	
425 430 435	
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Leu Val Ile Cys Ser Leu Leu Thr Leu Ile Val Ile Phe Tyr Tyr Leu	
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Gly Leu Leu Cys Gly Val Cys Gly Tyr Asp Arg His Ala Thr Pro Thr	
455 460 465 470	
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Thr Arg Gly Cys Val Ser Asn Thr Gly Gly Val Phe Leu Met Val Gly	
475 480 485	
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Val Gly Leu Ser Phe Leu Phe Cys Trp Ile Leu Met Ile Ile Val Val	
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Leu Thr Phe Val Phe Gly Ala Asn Val Glu Lys Leu Ile Cys Glu Pro	
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Tyr Thr Ser Lys Glu Leu Phe Arg Val Leu Asp Thr Pro Tyr Leu Leu	
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555 560 565	
aga ggc act tac ggc act ctt cac ctg cag aac agc ttc aat atc agt	1783
Arg Gly Thr Tyr Gly Thr Leu His Leu Gln Asn Ser Phe Asn Ile Ser	
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Glu His Leu Asn Ile Asn Glu His Thr Gly Ser Ile Ser Ser Glu Leu	
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Glu Ser Leu Lys Val Asn Leu Asn Ile Phe Leu Leu Gly Ala Ala Gly	
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aga aaa aac ctt cag gat ttt gct gct tgt gga ata gac aga atg aat	1927
Arg Lys Asn Leu Gln Asp Phe Ala Ala Cys Gly Ile Asp Arg Met Asn	
615 620 625 630	
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Leu Tyr Gln Ser Val Lys Ile Leu Gln Arg Thr Gly Asn Gly Leu Leu	
695 700 705 710	
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Glu Arg Val Thr Arg Ile Leu Ala Ser Leu Asp Phe Ala Gln Asn Phe	
715 720 725	

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Phe Ser Ile Ser Glu Lys Val Ala Ser Cys Lys Pro Val Ala Thr Ala	
760 765 770	
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Leu Asp Thr Ala Val Asp Val Phe Leu Cys Ser Tyr Ile Ile Asp Pro	
775 780 785 790	
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Asp Ser Glu Asp Val Tyr Asp Asp Val Glu Thr Ile Pro Met Lys Asn	
825 830 835	
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Met Glu Asn Gly Asn Asn Gly Tyr His Lys Asp His Val Tyr Gly Ile	
840 845 850	
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His Asn Pro Val Met Thr Ser Pro Ser Gln His	
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Cys	Val	Leu	Gly	Leu	Leu	Phe	Ile	Ile	Leu	Met	Pro	Leu	Val	Gly	Tyr	115	120	125
Phe	Phe	Cys	Met	Cys	Arg	Cys	Cys	Asn	Lys	Cys	Gly	Gly	Glu	Met	His	130	135	140
Gln	Arg	Gln	Lys	Glu	Asn	Gly	Pro	Phe	Leu	Arg	Lys	Cys	Phe	Ala	Ile	145	150	155
Ser	Leu	Leu	Val	Ile	Cys	Ile	Ile	Ile	Ser	Ile	Gly	Ile	Phe	Tyr	Gly	165	170	175
Phe	Val	Ala	Asn	His	Gln	Val	Arg	Thr	Arg	Ile	Lys	Arg	Ser	Arg	Lys	180	185	190
Leu	Ala	Asp	Ser	Asn	Phe	Lys	Asp	Leu	Arg	Thr	Leu	Leu	Asn	Glu	Thr	195	200	205
Pro	Glu	Gln	Ile	Lys	Tyr	Ile	Leu	Ala	Gln	Tyr	Asn	Thr	Thr	Lys	Asp	210	215	220
Lys	Ala	Phe	Thr	Asp	Leu	Asn	Ser	Ile	Asn	Ser	Val	Leu	Gly	Gly	Gly	225	230	235
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Pro	Leu	Cys	Leu	Val	His	Pro	Ser	Ser	Glu	Thr	Cys	Asn	Ser	Ile	Arg	305	310	315
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Pro	Val	Asp	Ala	Glu	Leu	Asp	Asn	Val	Asn	Asn	Val	Leu	Arg	Thr	Asp	340	345	350
Leu	Asp	Gly	Leu	Val	Gln	Gln	Gly	Tyr	Gln	Ser	Leu	Asn	Asp	Ile	Pro	355	360	365
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Pro	Ile	Gln	Asp	Ile	Leu	Ser	Ala	Phe	Ser	Val	Tyr	Val	Asn	Asn	Thr	405	410	415
Glu	Ser	Tyr	Ile	His	Arg	Asn	Leu	Pro	Thr	Leu	Glu	Glu	Tyr	Asp	Ser	420	425	430
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Val	Ile	Phe	Tyr	Tyr	Leu	Gly	Leu	Leu	Cys	Gly	Val	Cys	Gly	Tyr	Asp	450	455	460
Arg	His	Ala	Thr	Pro	Thr	Thr	Arg	Gly	Cys	Val	Ser	Asn	Thr	Gly	Gly	465	470	475
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Val Phe Leu Met	Val Gly Val Gly	Leu Ser Phe Leu Phe Cys Trp Ile
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Leu Met Ile Ile	Val Val Leu Thr Phe Val Phe Gly Ala Asn Val Glu	
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Lys Leu Phe Asn Lys Ser Lys Met Lys Leu Thr Phe Glu Gln Val Tyr		
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Ser Asp Cys Lys Lys Asn Arg Gly Thr Tyr Gly Thr Leu His Leu Gln		
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Ser Ile Ser Ser Glu Leu Glu Ser Leu Lys Val Asn Leu Asn Ile Phe		
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Leu Leu Gly Ala Ala Gly Arg Lys Asn Leu Gln Asp Phe Ala Ala Cys		
610	615	620
Gly Ile Asp Arg Met Asn Tyr Asp Ser Tyr Leu Ala Gln Thr Gly Lys		
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Ser Pro Ala Gly Val Asn Leu Leu Ser Phe Ala Tyr Asp Leu Glu Ala		
645	650	655
Lys Ala Asn Ser Leu Pro Pro Gly Asn Leu Arg Asn Ser Leu Lys Arg		
660	665	670
Asp Ala Gln Thr Ile Lys Thr Ile His Gln Gln Arg Val Leu Pro Ile		
675	680	685
Glu Gln Ser Leu Ser Thr Leu Tyr Gln Ser Val Lys Ile Leu Gln Arg		
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Thr Gly Asn Gly Leu Leu Glu Arg Val Thr Arg Ile Leu Ala Ser Leu		
705	710	715
Asp Phe Ala Gln Asn Phe Ile Thr Asn Asn Thr Ser Ser Val Ile Ile		
725	730	735
Glu Glu Thr Lys Lys Tyr Gly Arg Thr Ile Ile Gly Tyr Phe Glu His		
740	745	750
Tyr Leu Gln Trp Ile Glu Phe Ser Ile Ser Glu Lys Val Ala Ser Cys		
755	760	765
Lys Pro Val Ala Thr Ala Leu Asp Thr Ala Val Asp Val Phe Leu Cys		
770	775	780
Ser Tyr Ile Ile Asp Pro Leu Asn Leu Phe Trp Phe Gly Ile Gly Lys		
785	790	795
Ala Thr Val Phe Leu Leu Pro Ala Leu Ile Phe Ala Val Lys Leu Ala		
805	810	815
Lys Tyr Tyr Arg Arg Met Asp Ser Glu Asp Val Tyr Asp Asp Val Glu		
820	825	830
Thr Ile Pro Met Lys Asn Met Glu Asn Gly Asn Asn Gly Tyr His Lys		
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Asp His Val Tyr Gly Ile His Asn Pro Val Met Thr Ser Pro Ser Gln		
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His  
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